

TACIR



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One of TACIR's goals is provide useful information to Tennessee's residents and to everyone who is interested in understanding the challenges public policy makers face. As part of that continuing effort, we are developing a set of indicators that anyone can use to assess what's going on in their own county. This report is the first in a series that will present and explain those indicators. The series is intended to prompt discussion. Your feedback is welcome.

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Personal and Family Economic Well-Being Status and Momentum of Tennessee Counties

by Lynnisse Roehrich-Patrick and Cliff Lippard

There are many things we're interested in knowing about how well Tennessee's residents are getting along. There are as many ways to assess the economic well-being of families and individuals as there are, well, families and individuals. TACIR's role in facilitating that assessment is to evaluate objective data and figure out how to present it in a way that is at once credible and easy to understand. We have identified five readily available and current measures of personal and family economic well being. And we have devised a way—one way—to combine them into a single indicator of current status and, along with that, an indicator of momentum. We define momentum for this purpose as the speed and direction the status indicator is moving.

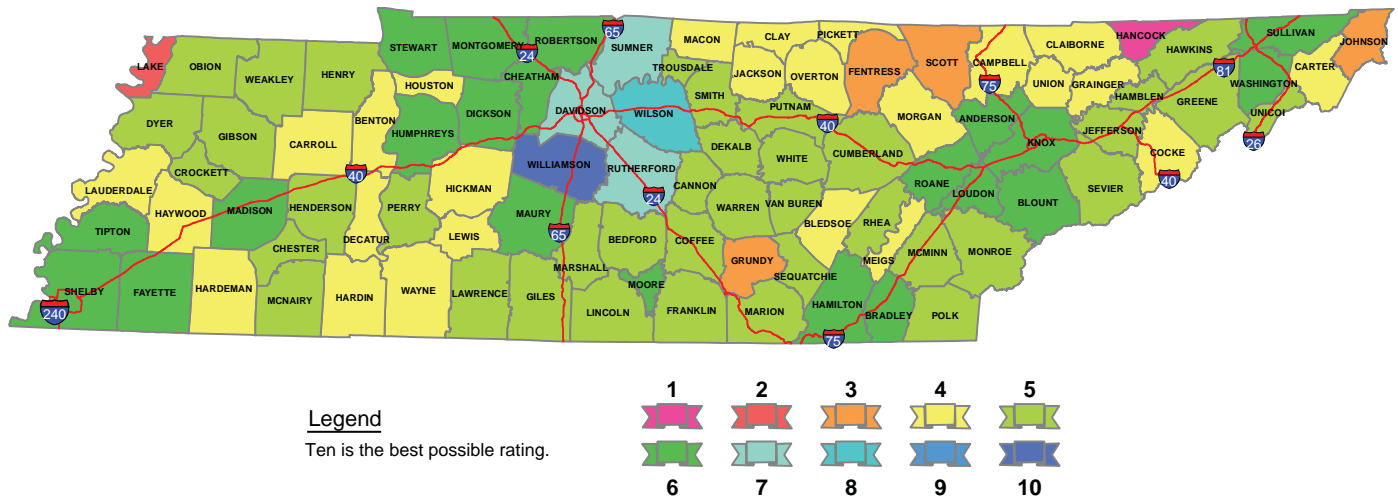
Personal and family economic well-being varies widely across the state, and that is not likely to change for the foreseeable future.

TACIR's new index of personal and family economic well-being, described on page 4, confirms what we expect, that the economic well-being of Tennessee's residents varies a lot from county to county and there are clear regional patterns. It is no surprise that residents of Williamson County have the highest economic well-being in the state. Williamson County has long been a wealthy suburb of Nashville, and in recent years, it has expanded its own business base and become a job generator in its own right. It has set such a high bar that the next strongest counties are two and three tiers below it, with Wilson County just ahead of Davidson, Rutherford, and Sumner. All are nearby, demonstrating the economic strength of the upper middle part of the state. (See Map 1 on page 2.)

At the other extreme is Hancock County in the northeast corner of the Cumberland Plateau. It is followed closely by Lake County in the far northwest corner of the state. Both counties are relatively isolated. Lake is a long way from any metropolitan area, and Hancock is separated from the Johnson City-Kingsport-Bristol area by several sharp ridges. Neither has direct access to an interstate; both are a long way from a major airport. The same is true for the four counties shown in orange. (See the table on page 3 and Map 1.) Real estate agents like to say it's location, location, location. That principle seems to apply to more than property values.

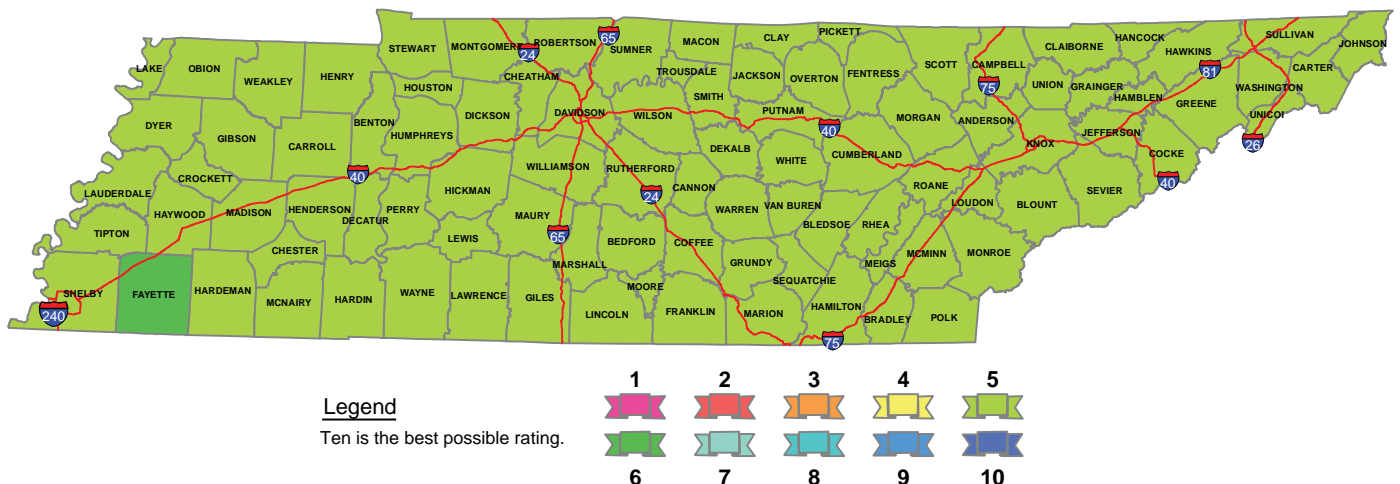
The 25 counties shown in yellow on Map 1, the second tier below the middle, are not obviously different from either the green counties that cluster around the middle of the scale or the orange to red counties at the lower end. Some actually border two of the “big four” counties (Hamilton and Knox); no yellow counties border Davidson and Shelby. Understanding why that’s the case could lead to ideas for improving the status of the counties that lag the middle.

**Map 1. Personal and Family Economic Well Being
County Ratings for Current Status (2005)**



While residents’ economic well-being varies widely across Tennessee’s 95 counties, the rate of change does not. Consequently, barring some other change, we see little likelihood that worse off counties will catch up with better off counties any time soon. As shown in the table and illustrated in Map 2, all of the counties are improving at about the same rate. Only Fayette County, just east of Memphis, stands out, and it is improving at only a slightly faster rate than the rest. Based on this data, which goes back to 1989-1990, something will have to change in the counties that lag the state average before their residents will begin to gain on those that are doing well. TACIR staff will be doing further research to identify what those changes might be.

**Map 2. Personal and Family Economic Well Being
County Ratings for Momentum (1989-2005)**



Personal and Family Economic Well-Being

	Current Status		Momentum	
	10-pt Scale	Rank	10-pt Scale	Rank
Tennessee	6.1		5.1	
Anderson County	6.3	17	4.9	86
Bedford County	5.6	28	4.9	78
Benton County	4.0	81	4.8	95
Bledsoe County	3.9	83	5.0	57
Blount County	6.3	18	5.0	38
Bradley County	5.9	21	4.9	80
Campbell County	3.7	89	5.2	11
Cannon County	5.1	44	5.0	52
Carroll County	4.6	66	5.0	66
Carter County	4.4	74	5.0	40
Cheatham County	6.5	7	5.0	37
Chester County	4.9	52	5.2	6
Claiborne County	4.0	82	5.2	14
Clay County	3.7	88	5.0	58
Cocke County	3.7	87	5.0	42
Coffee County	5.5	31	4.8	91
Crockett County	4.9	53	5.1	31
Cumberland County	4.7	58	5.1	26
Davidson County	7.1	3	5.0	39
Decatur County	4.5	69	5.1	24
DeKalb County	4.7	59	5.0	50
Dickson County	5.8	23	5.0	45
Dyer County	5.0	47	4.8	87
Fayette County	6.4	14	5.8	1
Fentress County	3.2	93	5.3	3
Franklin County	5.5	30	5.0	41
Gibson County	5.3	38	4.9	68
Giles County	5.3	36	5.0	67
Grainger County	4.5	70	5.2	12
Greene County	5.2	42	5.0	43
Grundy County	3.2	92	5.0	36
Hamblen County	5.5	29	4.9	72
Hamilton County	6.5	8	5.0	55
Hancock County	1.1	95	5.1	29
Hardeman County	4.3	75	5.1	35
Hardin County	4.1	78	5.1	20
Hawkins County	4.8	57	4.8	94
Haywood County	4.5	68	5.3	5
Henderson County	5.2	41	5.1	32
Henry County	4.8	55	5.0	65
Hickman County	4.3	76	4.8	90
Houston County	4.4	72	5.0	63
Humphreys County	5.8	24	4.9	71
Jackson County	4.3	77	5.1	27
Jefferson County	5.2	43	5.0	47
Johnson County	3.5	91	5.2	9
Knox County	6.4	13	5.0	60

	Current Status		Momentum	
	10-pt Scale	Rank	10-pt Scale	Rank
Lake County	2.0	94	4.8	88
Lauderdale County	4.0	80	4.9	79
Lawrence County	5.1	46	4.9	74
Lewis County	4.1	79	4.9	69
Lincoln County	5.4	34	5.0	59
Loudon County	6.4	9	5.1	23
McMinn County	5.2	39	4.9	84
McNairy County	4.6	63	5.0	49
Macon County	4.5	67	5.0	53
Madison County	5.9	22	5.1	28
Marion County	5.0	48	5.1	34
Marshall County	5.3	37	4.8	92
Mauzy County	6.4	10	5.1	33
Meigs County	4.6	62	4.9	83
Monroe County	5.0	50	5.1	21
Montgomery County	6.4	12	5.1	17
Moore County	6.3	16	5.0	56
Morgan County	3.8	86	4.9	82
Obion County	5.4	32	4.8	93
Overton County	4.4	71	5.1	18
Perry County	4.6	65	5.0	44
Pickett County	3.8	85	5.2	7
Polk County	4.7	60	5.0	62
Putnam County	5.1	45	4.9	85
Rhea County	4.9	51	4.9	73
Roane County	6.3	15	5.0	48
Robertson County	6.6	6	5.1	16
Rutherford County	7.0	5	4.9	76
Scott County	3.5	90	5.1	19
Sequatchie County	4.8	56	5.2	13
Sevier County	5.4	35	5.0	51
Shelby County	6.4	11	5.1	25
Smith County	5.6	27	5.0	61
Stewart County	5.6	26	5.1	22
Sullivan County	5.9	20	4.8	89
Sumner County	7.0	4	5.0	46
Tipton County	6.0	19	5.3	4
Trousdale County	5.0	49	5.1	30
Unicoi County	5.4	33	5.0	64
Union County	4.4	73	5.1	15
Van Buren County	5.2	40	5.4	2
Warren County	4.7	61	4.9	81
Washington County	5.7	25	5.0	54
Wayne County	3.9	84	4.9	75
Weakley County	4.8	54	4.9	70
White County	4.6	64	4.9	77
Williamson County	10.0	1	5.2	8
Wilson County	7.7	2	5.2	10

Note: Rankings are based on unrounded ratings. Ties would occur only if the unrounded ratings were identical.

Personal and Family Economic Well-Being

Top Ten Counties for Current Status

- 1 Williamson
- 2 Wilson
- 3 Davidson
- 4 Sumner
- 5 Rutherford
- 6 Robertson
- 7 Cheatham
- 8 Hamilton
- 9 Loudon
- 10 Maury

Top Ten Counties for Momentum

- 1 Fayette
- 2 Van Buren
- 3 Fentress
- 4 Tipton
- 5 Haywood
- 6 Chester
- 7 Pickett
- 8 Williamson
- 9 Johnson
- 10 Wilson

This is just one way to look at the economic well-being of people and families across the state's 95 counties. We offer it as a basis for discussion and thought. Comments about it are welcome.

The next in the series will be economic activity across the counties.

What goes into TACIR's indicator of personal and family economic well-being?

There are two readily available measures of income for Tennesseans at the county level: income per capita and median household income. Both measures are estimates, provided by the federal government. Neither measure is a perfect measure of local income, and so combining them, if a way can be found to do that, makes sense. In addition, there are poverty rates for each county. Those rates are available for all residents and for children (ages 5 to 17). TACIR's indicator of personal and family economic well-being includes all four of those measures plus wages. Using wages is a little tricky because people travel across county lines for work. But most people work in their own county, so we chose to include them.

How does TACIR combine all of those different measures into one?

It's not easy, but it's not highly technical. If you've had a college course in statistics, you probably know how. And if you have an ordinary spreadsheet package like Excel, you can easily do it. Some high school math classes include these methods. Each of the measures is on a different scale. Some are in dollars, and some are percentages. One is for a whole household, two are for individuals, and the poverty measures are for families. Poverty is measured that way based on the reasonable assumption that families share financial resources.

One way to combine these measures would be simply to rank the counties for each one and then combine, maybe average, the rankings. But rankings fail to indicate how far apart the actual numbers are. Another way to combine them, admittedly more complicated, is to use a statistical measure called the standard deviation to determine how far each county is from the average of all counties. You can subtract the figure for each county by the average and divide the difference by the standard deviation to get something that is arbitrarily called a z-score. Z-scores show how far a number is from the average. Z-scores for different measures—like per capita income and percent of children living with families that are poor—can be combined and they still show how close or far apart the original numbers are.

That sounds complicated. How does TACIR make it easy to understand?

We take those z-scores and average the five figures for each county then convert the result to a rating on a ten-point scale. A ten is the top of the heap. A one is at the bottom. But there may or may not be a ten or a one. That depends on how spread out the counties are to begin with. Take poverty, for example. Theoretically, it's possible for a county to have no one who's poor. It would be at 0%, and that would be a ten. It's equally possible (theoretically) for everyone in a county to be poor. That county would be at 100%, and it would get a one. But no Tennessee county is at 100%, and none is at 0%. The counties' poverty rates are more clumped than that. And the amount of change in the counties' poverty rates as time goes by is even more clumped. So counties' ratings on a ten-point scale would be equally clumped around the middle. By allowing the data itself to determine how to spread the counties over the ten-point scale, we are able to show how similar and how different they are.